

Application No.: Not Yet Assigned

Docket No.: 05581-00132-US

AMENDMENTS TO THE CLAIMS

1. (Original) Process for the preparation of polypropylene having an increased content of β -crystalline polypropylene, characterized in that nanoscale iron oxide and polypropylene are mixed and melted at a temperature of at least 150°C and subsequently cooled in such a way that the cooled polypropylene melt has an increased content of β -crystalline polypropylene.

2. (Currently amended) Process according to Claim 1, characterized in that a content of β -crystalline polypropylene of greater than 50%, ~~preferably from 70 to <100%~~, is produced on cooling of the polypropylene melt.

3. (Currently Amended) Process according to Claim 1 ~~or 2~~, characterized in that the cooling of the polypropylene melt is carried out at a temperature in the range 100 – 140°C.

4. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 3~~, characterized in that the mixture of polypropylene and iron oxide is melted in an extruder, ~~preferably in a twin-screw extruder~~, at a temperature of from 150 to 170°C.

5. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 4~~, characterized in that the polypropylene of the mixture is an isotactic polypropylene having a melting point in the range from 140 to 170°C.

6. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 5~~, characterized in that the polypropylene is a copolymer having a comonomer content of ethylene and/or butylene of up to 10% by weight.
7. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 6~~, characterized in that the polypropylene is a mixture of propylene homopolymer and propylene copolymer.
8. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 6~~, characterized in that the nanoscale iron oxide has a mean particle size of less than 50 nm, ~~preferably from 1 to 30 nm~~.
9. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 7~~, characterized in that the iron oxide comprises Fe(II) or Fe(III) oxide.
10. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 8~~, characterized in that the iron oxide has cubic closest packing of the O²⁻ ions.
11. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 9~~, characterized in that the iron oxide is Fe₃O₄ or Fe₂O₃.

12. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 10~~, characterized in that the iron oxide is magnetite or maghemite.
13. (Currently Amended) Process according to Claim 1 ~~one of Claims 1 to 11~~, characterized in that the iron oxide has been provided with a surface coating.
14. (Currently amended) Process according to Claim 12, characterized in that the surface coating consists of long-chain fatty acids, ~~preferably oleic acid or stearic acid~~, silanes, amines or sulphonates.
15. (Original) Process according to Claim 13, characterized in that a mixture of polypropylene and nanoscale iron oxide is prepared, and this mixture is melted and cooled.
16. (Original) Process according to Claim 14, characterized in that a compound of polypropylene and nanoscale iron oxide is prepared, and this compound is mixed with polypropylene, melted and cooled.
17. (Original) Process for the production of a biaxially stretched flat film, characterized in that nanoscale iron oxide and polypropylene are mixed and melted in an extruder at a temperature of at least 150°C, and the melt is extruded through a flat-film die, and the melt is cooled to give a pre-film in such a way that a content of at least 50% (measured by DSC) of β -crystalline polypropylene is formed, and the pre-film is then warmed and stretched in

the longitudinal direction and cooled, subsequently re-warmed and stretched in the transverse direction, and where the temperature during longitudinal stretching is selected in such a way that the β -crystalline polypropylene of the pre-film is converted into the alpha modification of polypropylene.

18. (Original) Process according to Claim 17, characterized in that the biaxially oriented film is opaque and porous.
19. (New) Process according to Claim 1, characterized in that a content of β -crystalline polypropylene from 70 to < 100%, is produced on cooling of the polypropylene melt and the nanoscale iron oxide has a mean particle size from 1 to 30 nm.
20. (New) Process according to Claim 12, wherein the surface coating consists of oleic acid or stearic acid, silanes, amines or sulphonates.